ABSTRACT

A method for performing time and frequency Signal-to- Noise Ratio (SNR) dependent weighting in speech recognition is described that includes for each period t estimating the SNR to get time and frequency SNR information $\eta_{t,f}$; calculating the time and frequency weighting to get $\gamma_{t,f}$; performing the back and forth weighted time varying DCT transformation matrix computation MG_tM^{-1} to get T_t ; providing the transformation matrix computation T_t and the original MFCC feature o_t that contains the information about the SNR to a recognizer including the Viterbi decoding; and performing weighted Viterbi recognition $b_j(o_t)$.